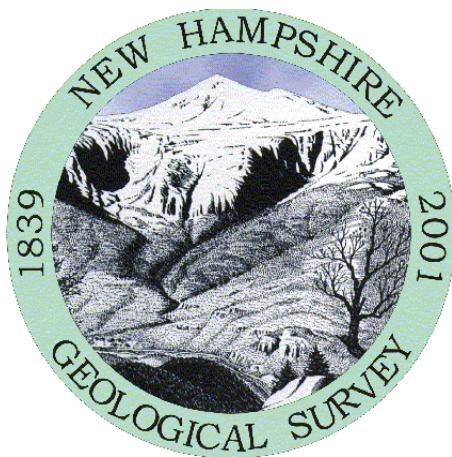


New Hampshire Groundwater Level Monitoring

March, 2019



**New Hampshire Geological Survey
29 Hazen Drive, PO Box 95
Concord, New Hampshire 03302-0095**

July 31, 2019

GROUNDWATER CONDITIONS SUMMARY

According to the Northeast Regional Climate Center at Cornell University, New Hampshire received an average of 1.72 inches of rain during the month of March, which is -1.96 inches below normal or 47% of normal based on the 1981-2010 precipitation records. Precipitation was distributed evenly between the northern and southern portions of the state. The state is currently free from drought and abnormally dry conditions according to current data released by the National Drought Mitigation Center.

The overburden wells, or wells that monitor the unconsolidated materials above bedrock, are indicating normal to high groundwater levels over the majority of the state, with the exception of Albany. The Lancaster well was unable to be measured due to ice cover. The groundwater levels at overburden wells in Barnstead, Concord (CVW-04), Deerfield, Epping, Franklin, Greenfield, New Durham, and New London have been normal to high over the last six-month period. The bedrock well at Hooksett is currently below normal. Wells that have a period of record (POR) less than 10 years were not statistically analyzed. However, their six-month hydrographs are shown in the hydrograph section.

The New Hampshire Geological Survey's groundwater monitoring network (Figure 1) currently includes 11 bedrock and 20 overburden (Figure 2) observation wells, all of which are measured monthly by hand. Using the monthly hand readings, monthly averages and percentile statistics were calculated and are summarized in Figures 1 through 3, in the following hydrographs*, and in Table 1.

*The hydrographs show the following data over a period of six months: (1) current groundwater depths, (2) the monthly average over the POR of the well, and (3) color-coded statistical ranges over the POR of the well. Note the POR is listed below each month's column on the chart and reported as the number of measurements for that respective month. This might include multiple readings in the same month and does not include any gaps in data so therefore may not represent a continuous period.

March 2019 Groundwater Levels

Legend

- High
 - Above norm
 - Normal
 - Below norm
 - Low
 - Not Analyzed
 - ✗ No Data (frozen wellhead)
- County boundaries

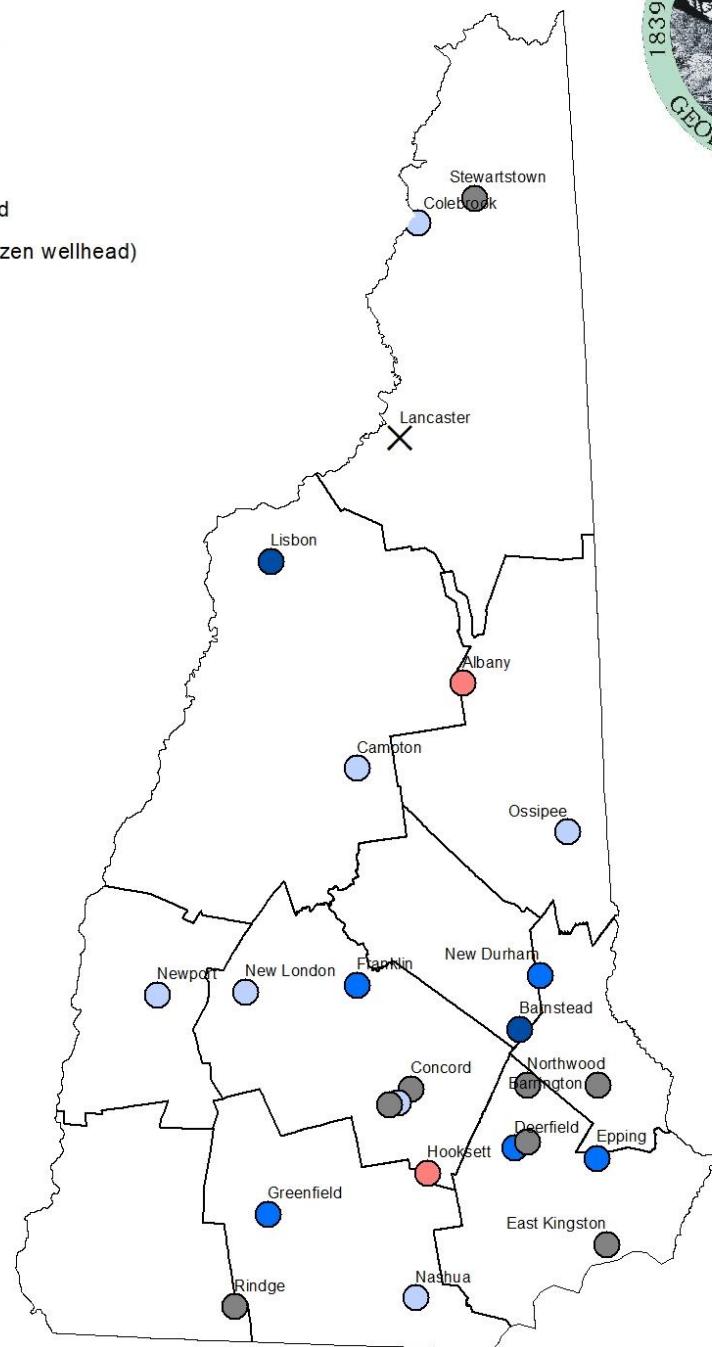


Figure 1. Groundwater Monitoring Network showing groundwater levels with respect to drought areas defined by the National Drought Mitigation Center.

March 2019 Groundwater Levels

Overburden Groundwater Conditions

Legend

- High
- Above norm
- Normal
- Below norm
- Low
- Not Analyzed
- ✗ No Data (frozen wellhead)

□ Counties

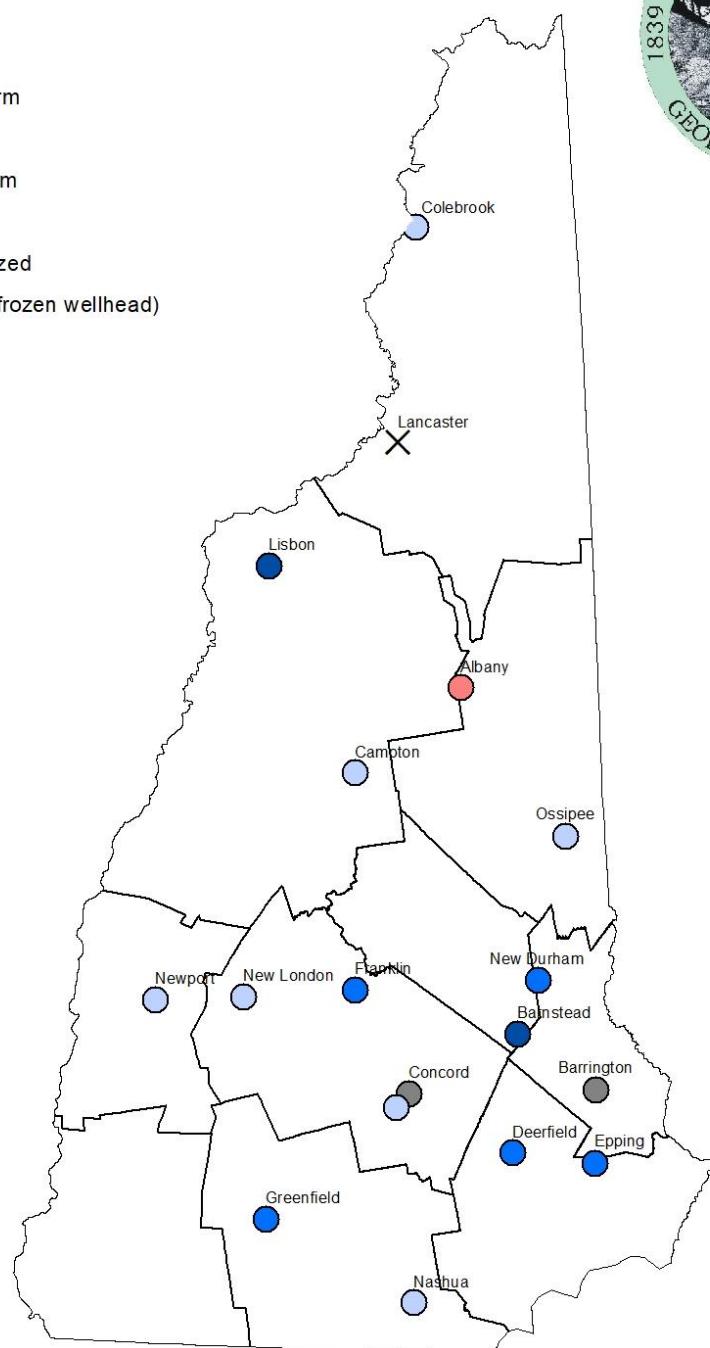
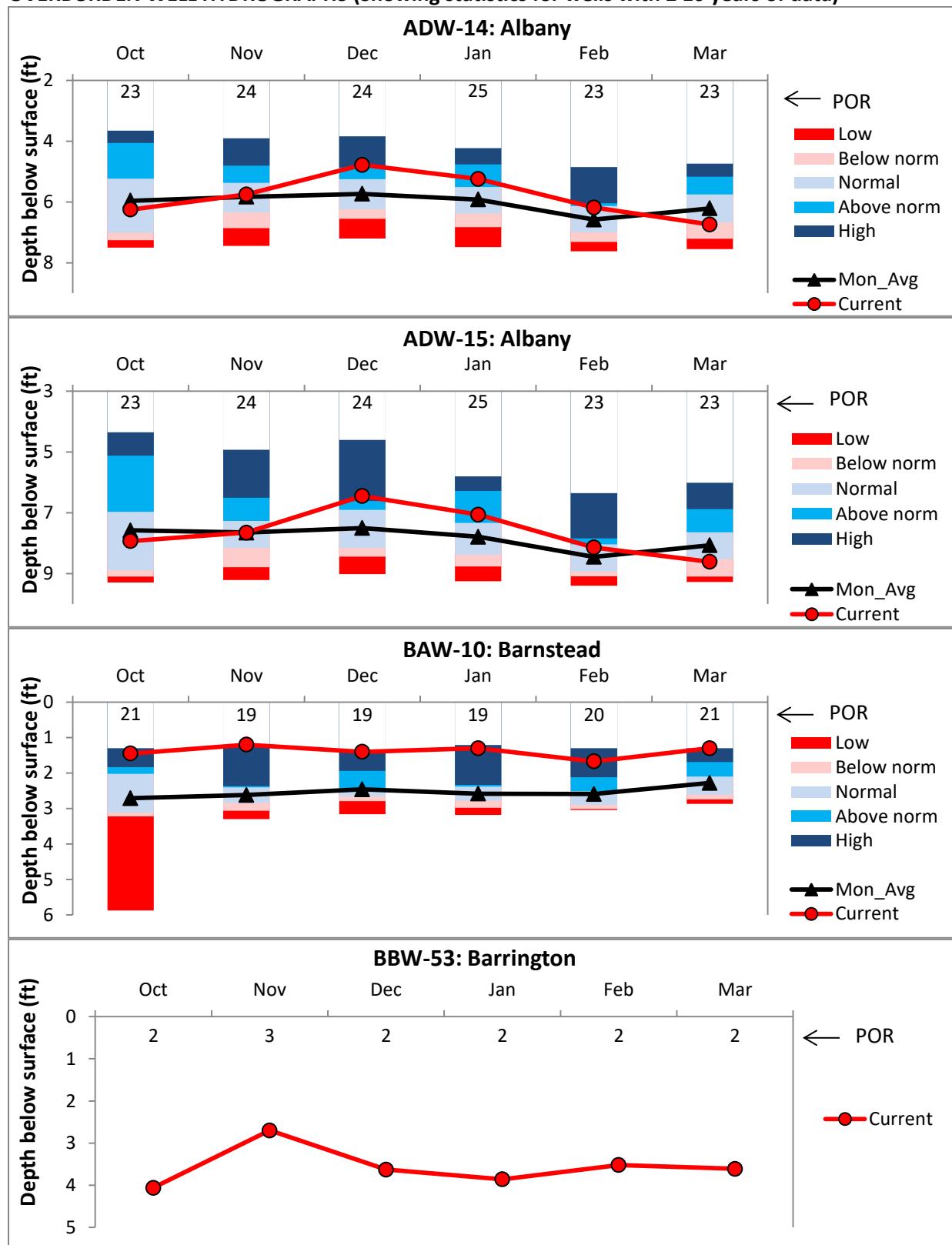
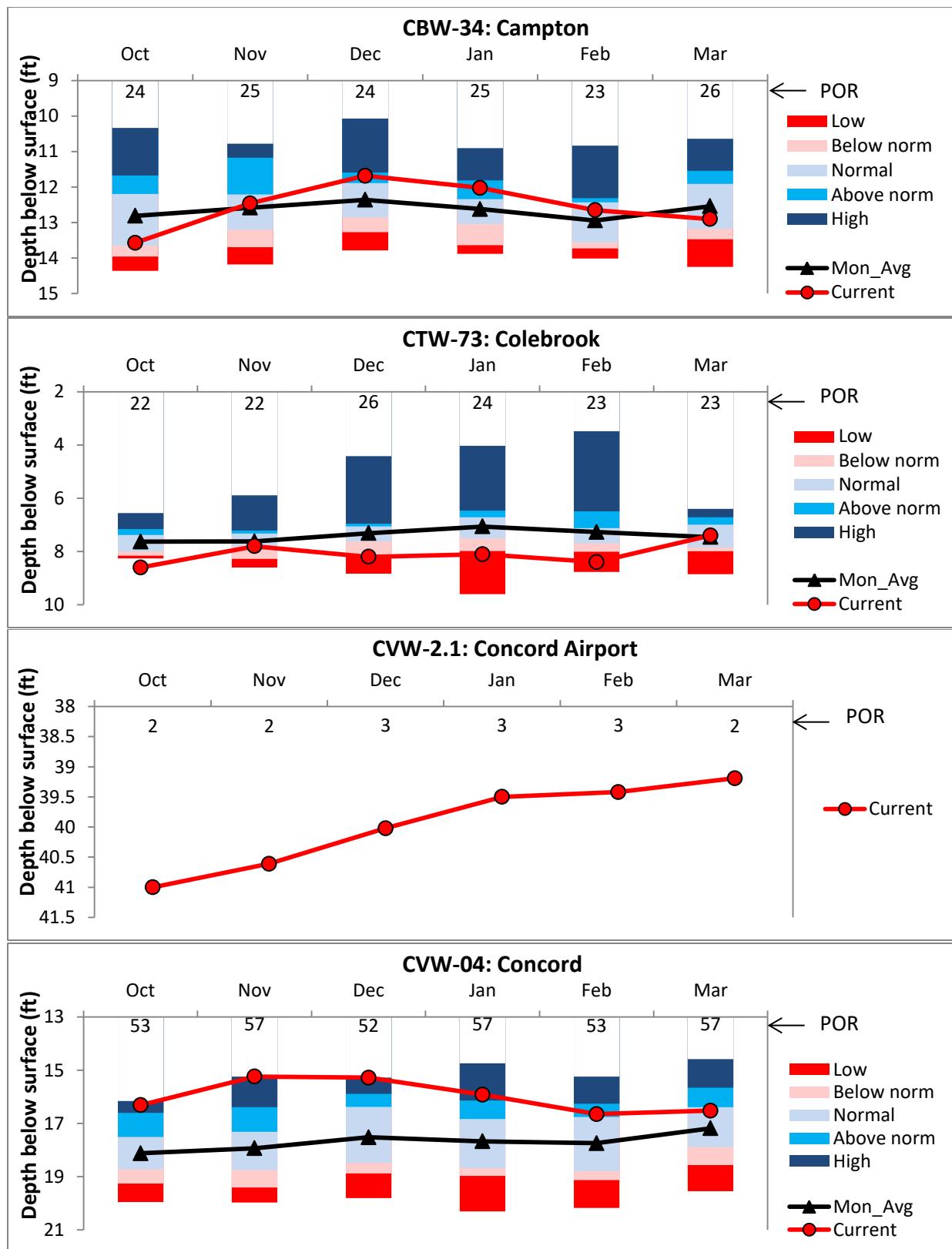
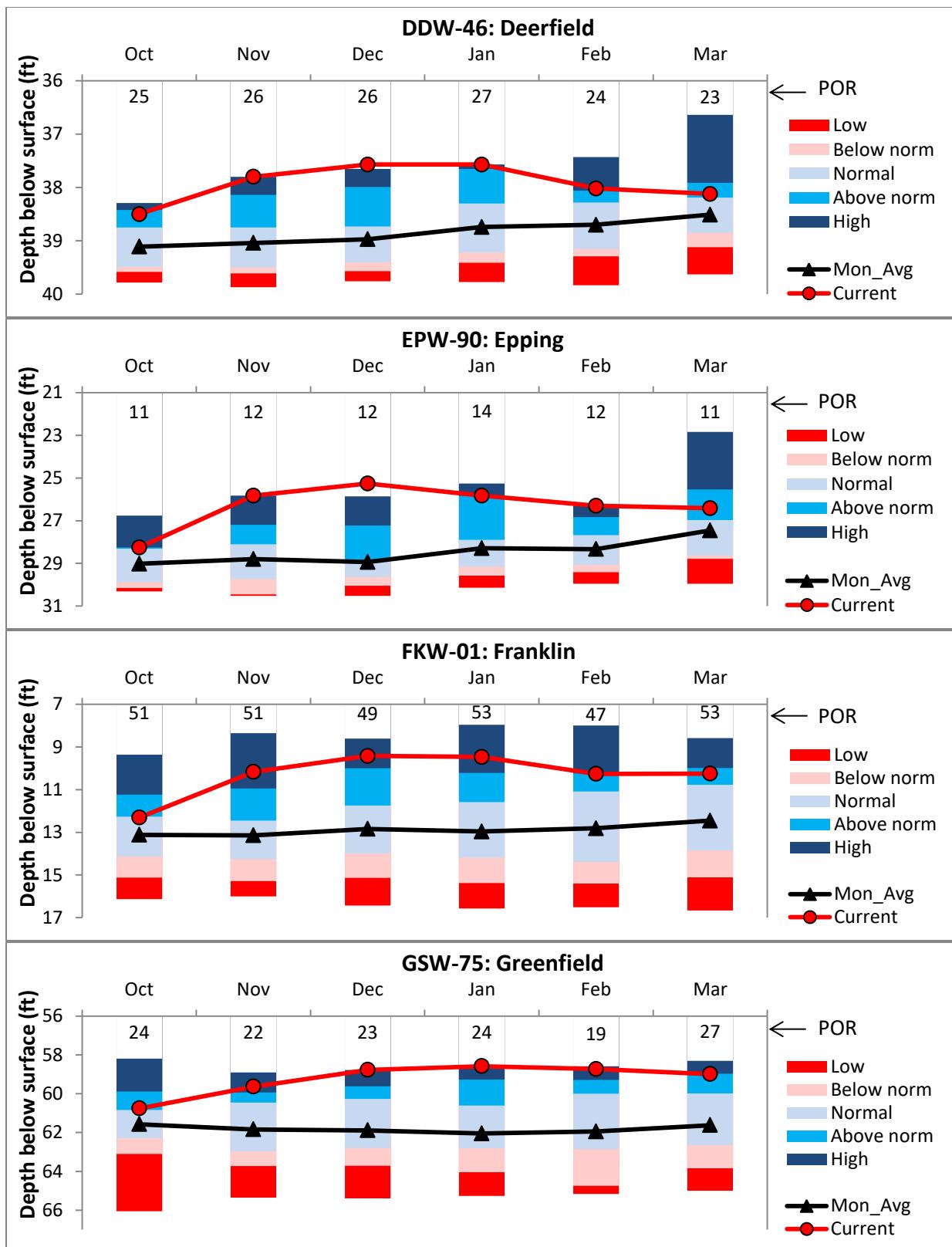


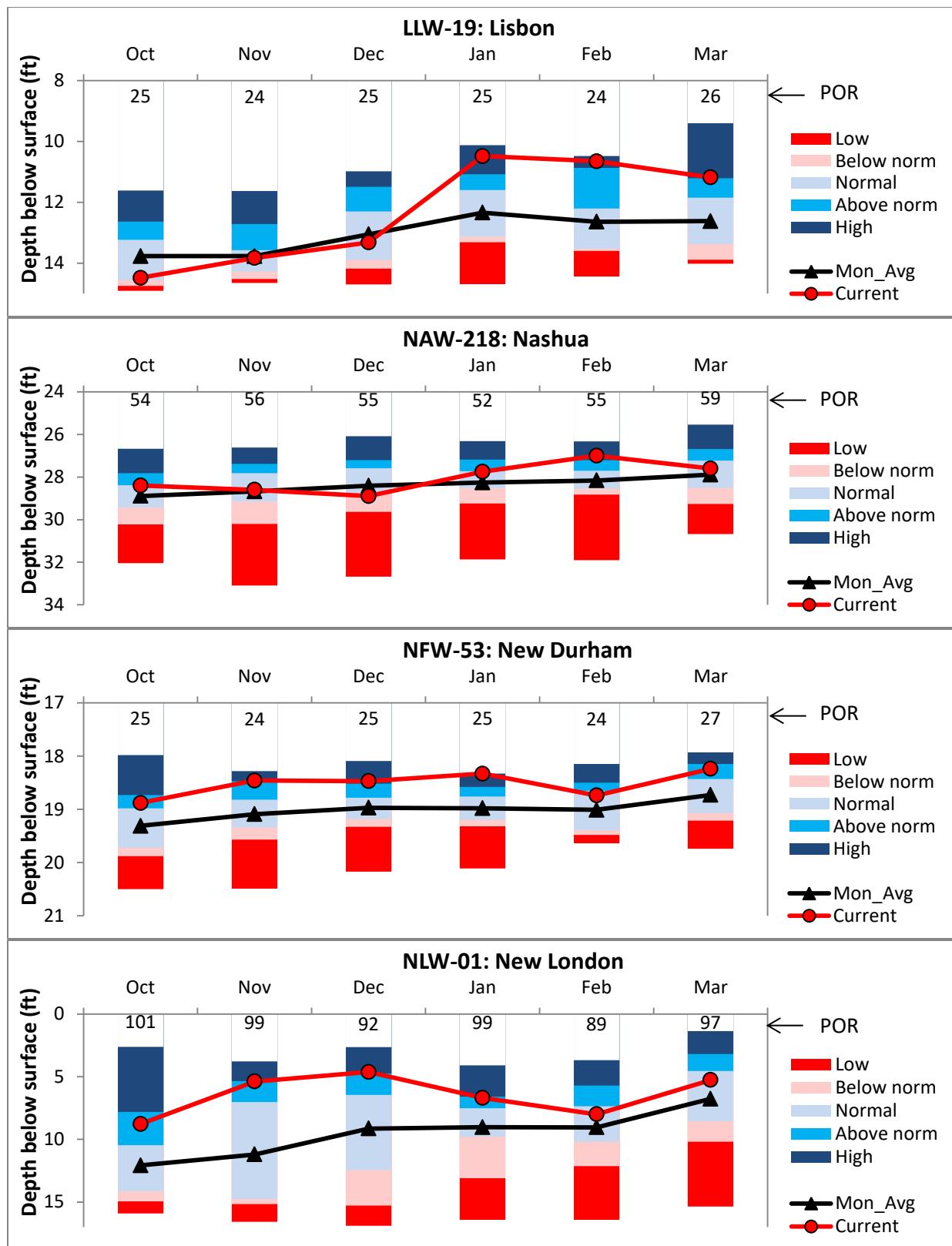
Figure 2. Overburden wells showing groundwater levels with respect to drought areas defined by the National Drought Mitigation Center. Note: Points at Newport and Albany represent couplets.

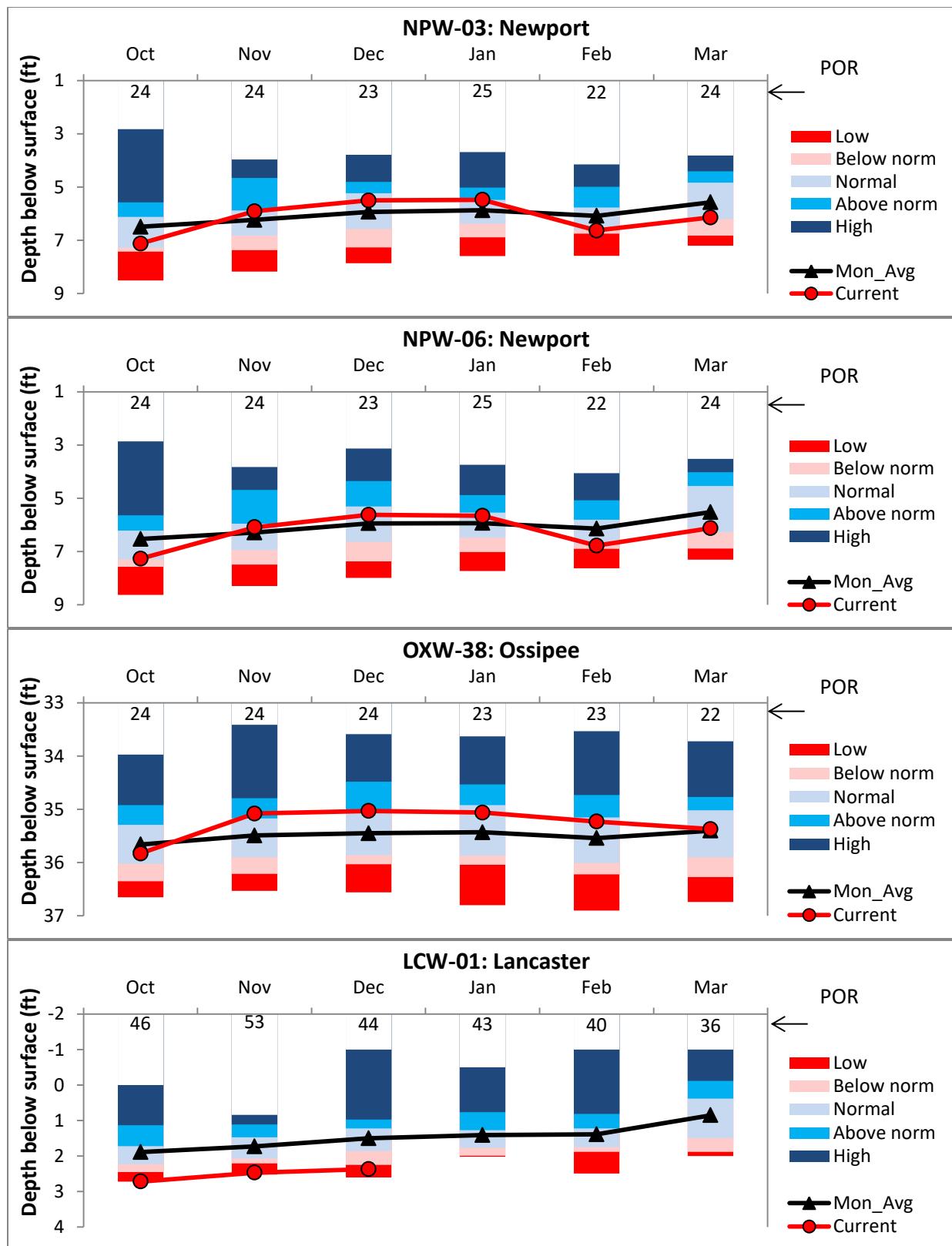
OVERBURDEN WELL HYDROGRAPHS (Showing statistics for wells with ≥ 10 years of data)

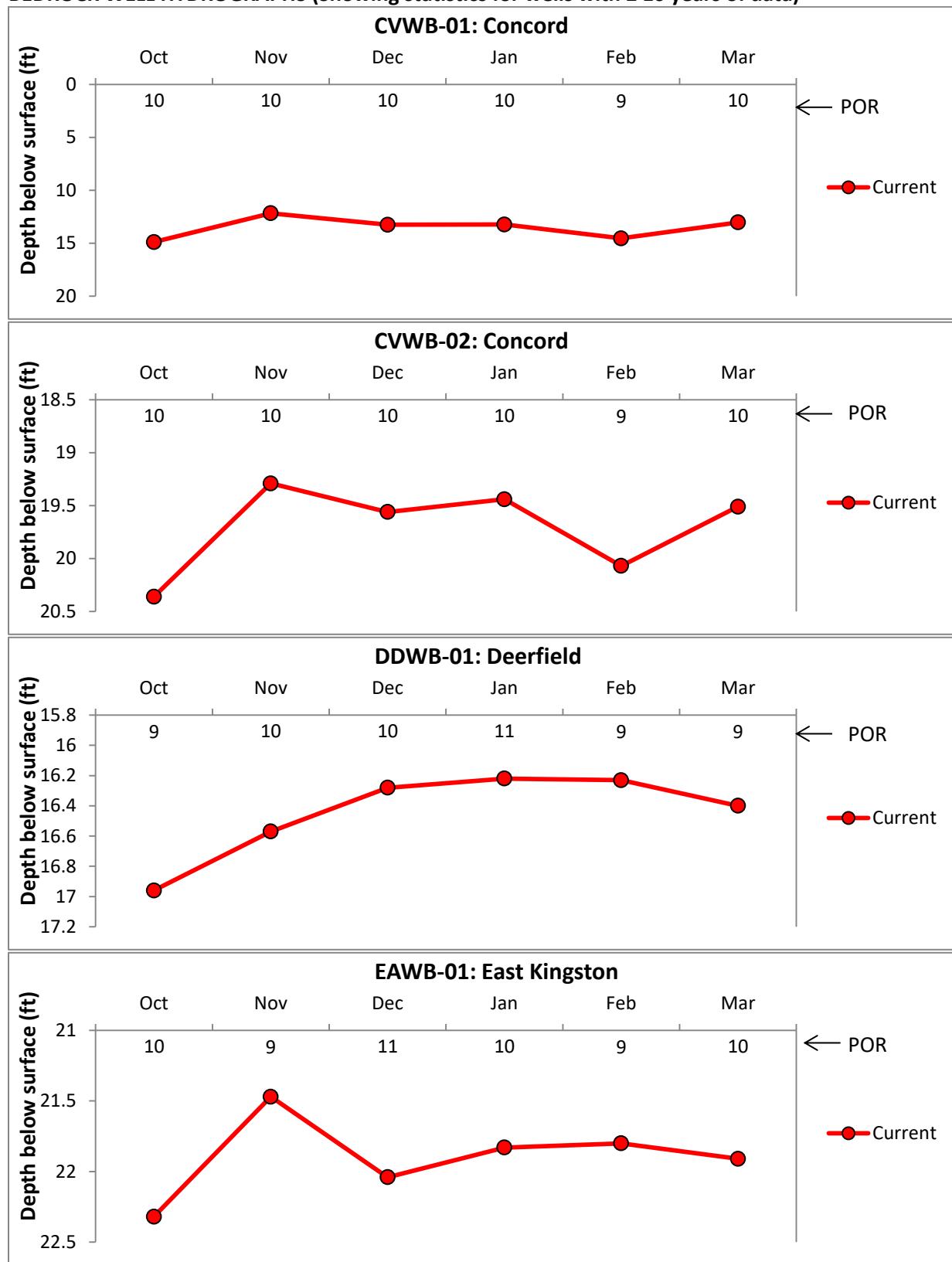


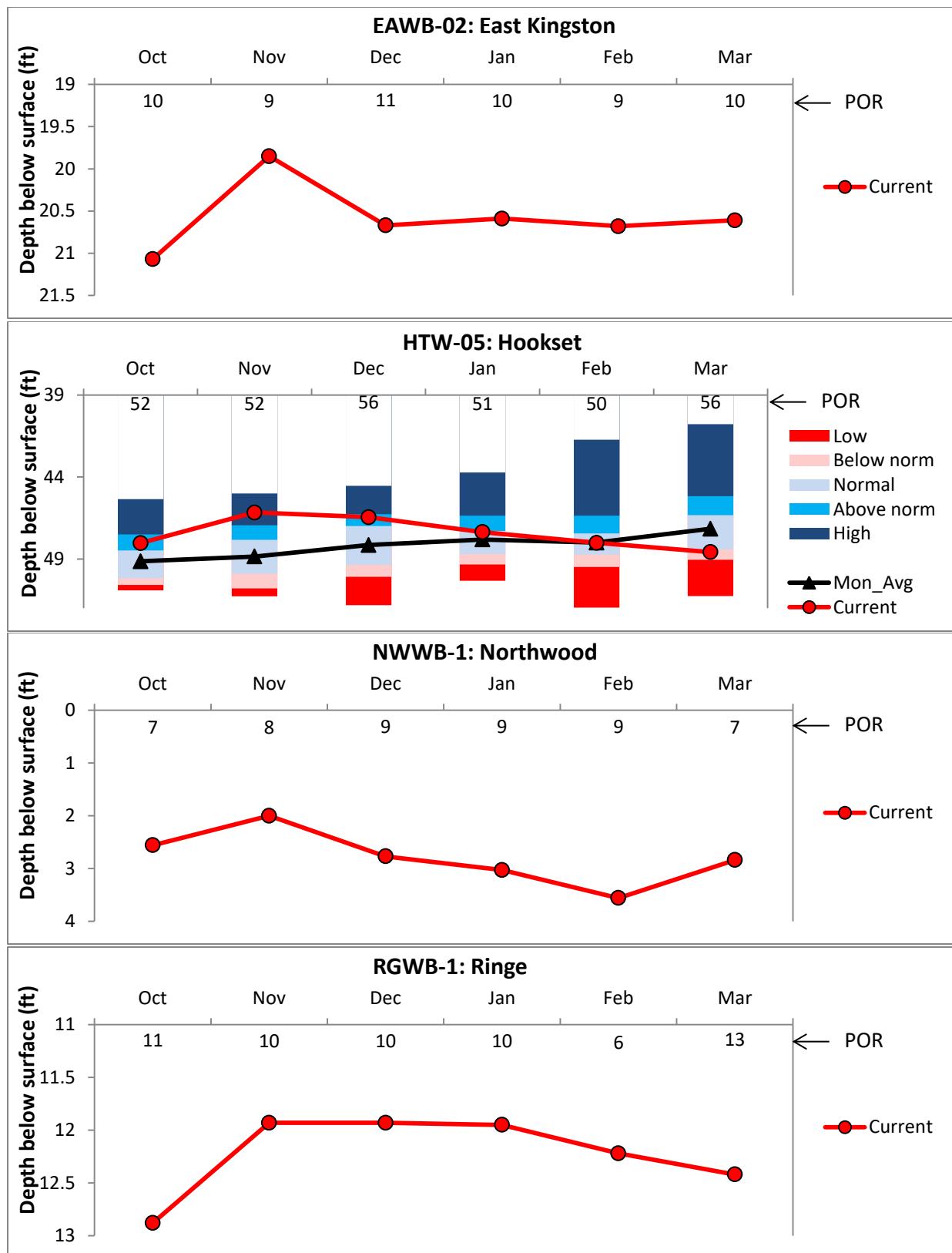








BEDROCK WELL HYDROGRAPHS (Showing statistics for wells with ≥ 10 years of data)



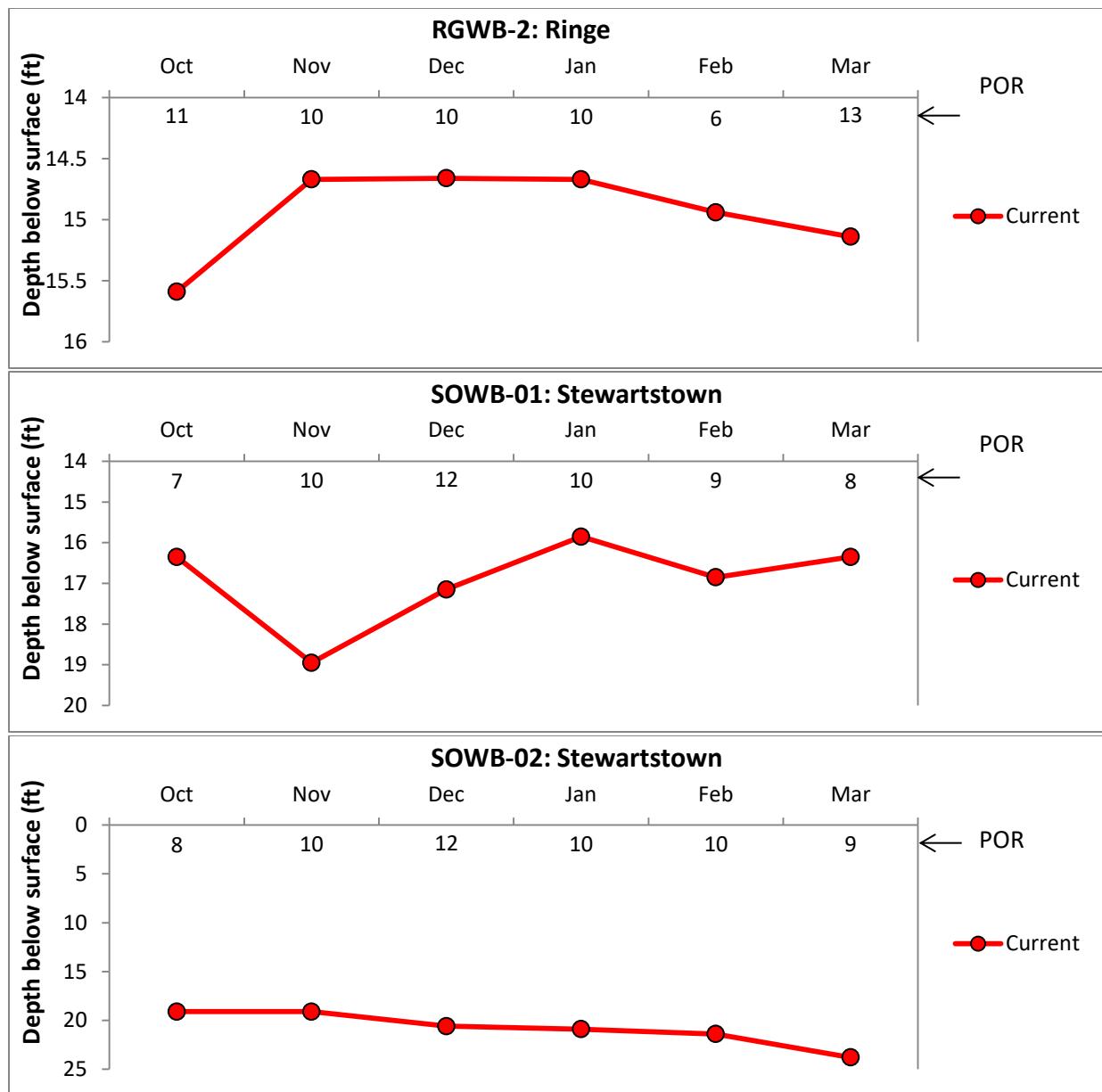


Table 1. Summary of groundwater levels in overburden wells

Well	Region	Well type	Screen/ open Interval (ft)	Depth to Water (ft)	Monthly Average (ft)	Current Status	Departure from Avg. (ft)	No. of meas.
BAW-10	Lakes	Overburden	23-25	1.3	2.28	High	0.98	21
FKW-01	Lakes	Overburden	45.5-47.5	10.25	12.45	Above norm	2.2	53
NFW-53	Lakes	Overburden	28-30	18.24	18.73	Above norm	0.49	27
OXW-38	Lakes	Overburden	0-22.55	35.37	35.4	Normal	0.03	22
CVW-02.1	Merrimack	Overburden	59.8-61.8	39.19	-	Not Analyzed	-	2
CVW-04	Merrimack	Overburden	25-27	16.52	17.18	Normal	0.66	57
DDW-46	Merrimack	Overburden	59.8-61.8	38.12	38.51	Above norm	0.39	23
NAW-218	Merrimack	Overburden	66-68	27.6	27.89	Normal	0.29	59
CVWB-01	Merrimack	Bedrock	470-480	19.51	-	Not Analyzed	-	10
CVWB-02	Merrimack	Bedrock	0-315	13.03	-	Not Analyzed	-	10
DDWB-01	Merrimack	Bedrock	0-300	16.4	-	Not Analyzed	-	9
HTW-05	Merrimack	Bedrock	0-102.7	48.58	47.16	Below norm	-1.42	56
NWWB-01	Merrimack	Bedrock	0-130	2.84	-	Not Analyzed	-	7
GSW-75	Monadnock	Overburden	35.8-37.8	58.99	61.62	Above norm	2.63	27
RGWB-01	Monadnock	Bedrock	391-401	12.42	-	Not Analyzed	-	13
RGWB-02	Monadnock	Bedrock	0-285	15.14	-	Not Analyzed	-	13
CTW-73	North Woods	Overburden	105-107	7.4	7.46	Normal	0.06	23
LCW-01	North Woods	Overburden	28-30	NULL	0.85	No Data	-	36
SOWB-01	North Woods	Bedrock	443-453	16.35	-	Not Analyzed	-	8
SOWB-02	North Woods	Bedrock	0-303	23.8	-	Not Analyzed	-	9
BBW-53	Seacoast	Overburden	21-23	3.61	-	Not Analyzed	-	2
EPW-90	Seacoast	Overburden	39.45-40.7	26.42	27.46	Above norm	1.04	11
EAWB-01	Seacoast	Bedrock	463-473	21.91	-	Not Analyzed	-	10
EAWB-02	Seacoast	Bedrock	0-323	20.61	-	Not Analyzed	-	10
NLW-01	Sunapee	Overburden	40-42	5.27	6.77	Normal	1.5	97
NPW-03	Sunapee	Overburden	40.5-42.5	6.14	5.57	Normal	-0.57	24
NPW-06	Sunapee	Overburden	58-60	6.12	5.52	Normal	-0.6	24
ADW-14	White Mtns	Overburden	77.5-79.5	6.74	6.21	Below norm	-0.53	23
ADW-15	White Mtns	Overburden	16-18	8.61	8.07	Below norm	-0.54	23
CBW-34	White Mtns	Overburden	21-23	12.9	12.54	Normal	-0.36	26
LLW-19	White Mtns	Overburden	49.8-52.3	11.18	12.62	High	1.44	26